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Cycling Against Traffic

By Reed Kempton

I had a neighbor once who complained about how dangerous it had become for him to bicycle to work. After hearing him say "I've been hit four times in the last month, and I ride on the sidewalk!" I spent the next half-hour explaining to him why riding on the sidewalk, especially facing traffic, was not as safe as he thought it was.

In this article, I will explain why bicycling against traffic, whether you're on a sidewalk or a path adjacent to a roadway, may not be as safe as you might think.

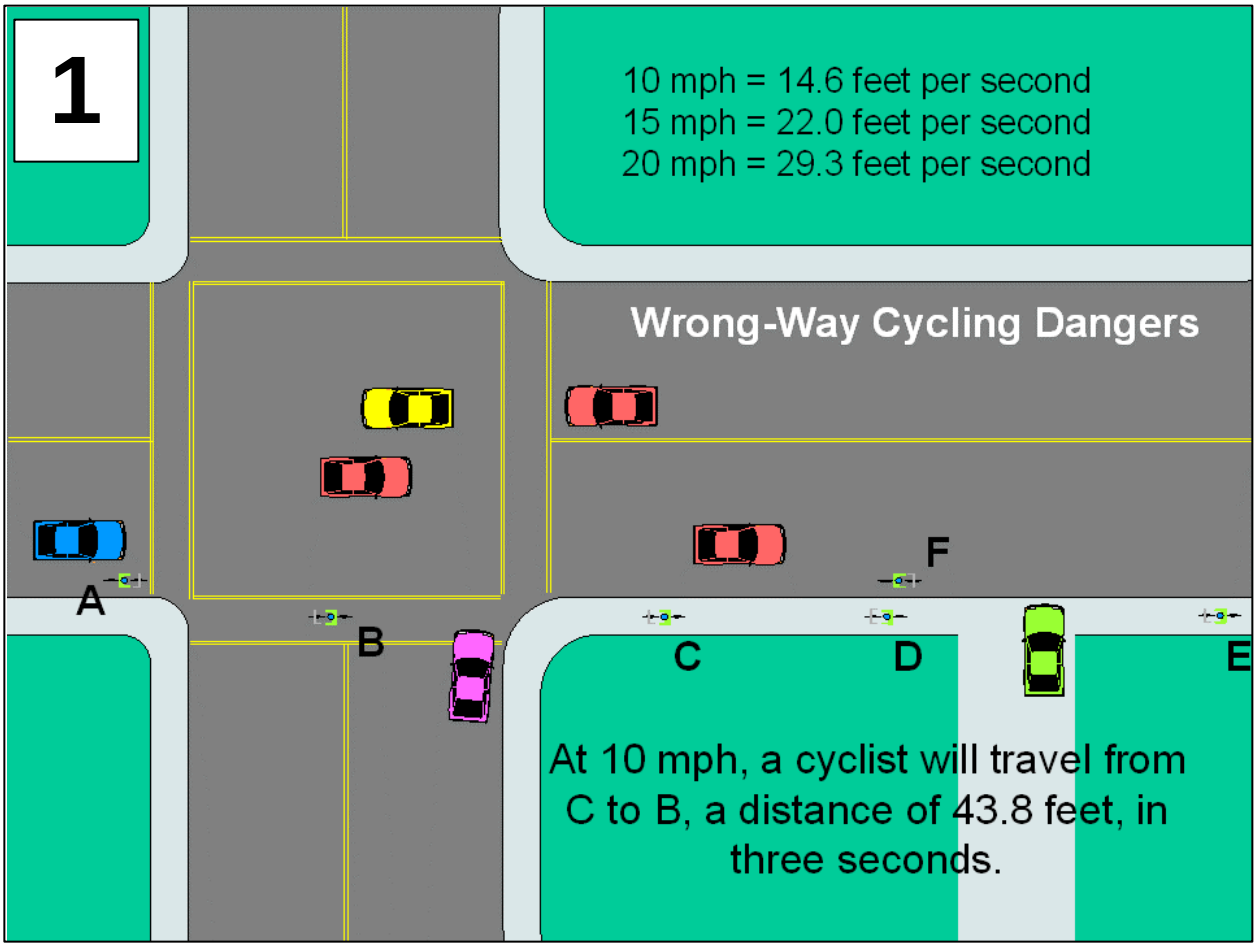
Automobile drivers are creatures of habit. Under the same circumstances, they tend to do the same things, in the same order, as though they had been practicing it for years. They have a basic set of rules that they follow and they expect other highway users to do the same. A collision is the result of someone not adhering to the rules.

"I've been hit four times in the past month, and I ride on the sidewalk!"

Figure 1 represents a typical intersection where motorists are following the rules and behaving in a predictable manner. The cyclists at **A** and **F** are moving with the flow of traffic. The other cyclists are moving against traffic. At 10 mph (a speed well within the abilities of a beginner), the cyclist at **C** will arrive at **B** in three seconds. At 10 mph, a cyclist will travel 14.6 feet per second. A cyclist moving at 20 mph (a speed easily reached by a strong cyclist) will close the gap from **C** to **B** in 1.5 seconds.

The driver of the yellow car is waiting for the intersection to clear to safely make a left turn. The driver is looking towards the blue car and the cyclist at **A**. Since there is no reason to expect overtaking traffic to approach on the left, the driver will not turn his head and look over his left shoulder before turning. It will only take three seconds (at 10 mph) for the cyclist at **C** to move into the path of the turning yellow car at **B**. If the yellow car is able to stop without hitting the cyclist, it could be in the path of another vehicle trailing the blue car. The trailing vehicle would have expected the yellow car to clear the intersection and may not be able to avoid a collision.

The purple car is approaching the intersection preparing to make a right turn. The driver's eyes are focused on the blue car and the bicyclist at **A**. The driver will not expect traffic approaching on his right. Even if he looks right, and many drivers don't, the cyclist at **C** may be hidden by a sign, wall, or landscaping. At 10 mph, the cyclist at **C**



will close the gap to the purple car in 1.5 seconds. The driver of the purple car will not see the cyclist until they are about to collide.

The driver of the green car is exiting a driveway. He will stop at the edge of the street, blocking the sidewalk. In many circumstances, the driver cannot get a clear view of approaching traffic from behind the sidewalk. Since cars approaching from the left are closer and more of a threat, the driver will usually look to his left first. The cars coming from his right are on the far side of the street and are not a concern unless a left turn is being contemplated. The red car and the cyclist at **F** are in the normal and expected positions on the roadway for approaching traffic. The position of the green car on the sidewalk does not impede the travel of the cyclist at **F**. The cyclist at **E**, approaching from the right traveling at 10 mph, will close the gap in 1.5 seconds. This cyclist is not in a normal and expected position on the roadway and may not be seen by the driver of the green car. This cyclist must stop since the green car is blocking the sidewalk. This is one of the most common types of car/bike collisions.

Figure 2 shows a 10' wide path adjacent to a street. The cyclists at **A**, **D**, **E**, and **J** are traveling in the same direction as traffic in the right lane on the street. The cyclists at **B**, **C**, **F**, and **H** are traveling in a direction contrary to the flow of traffic on the street. It is important to note that they are moving in the proper position on the path.

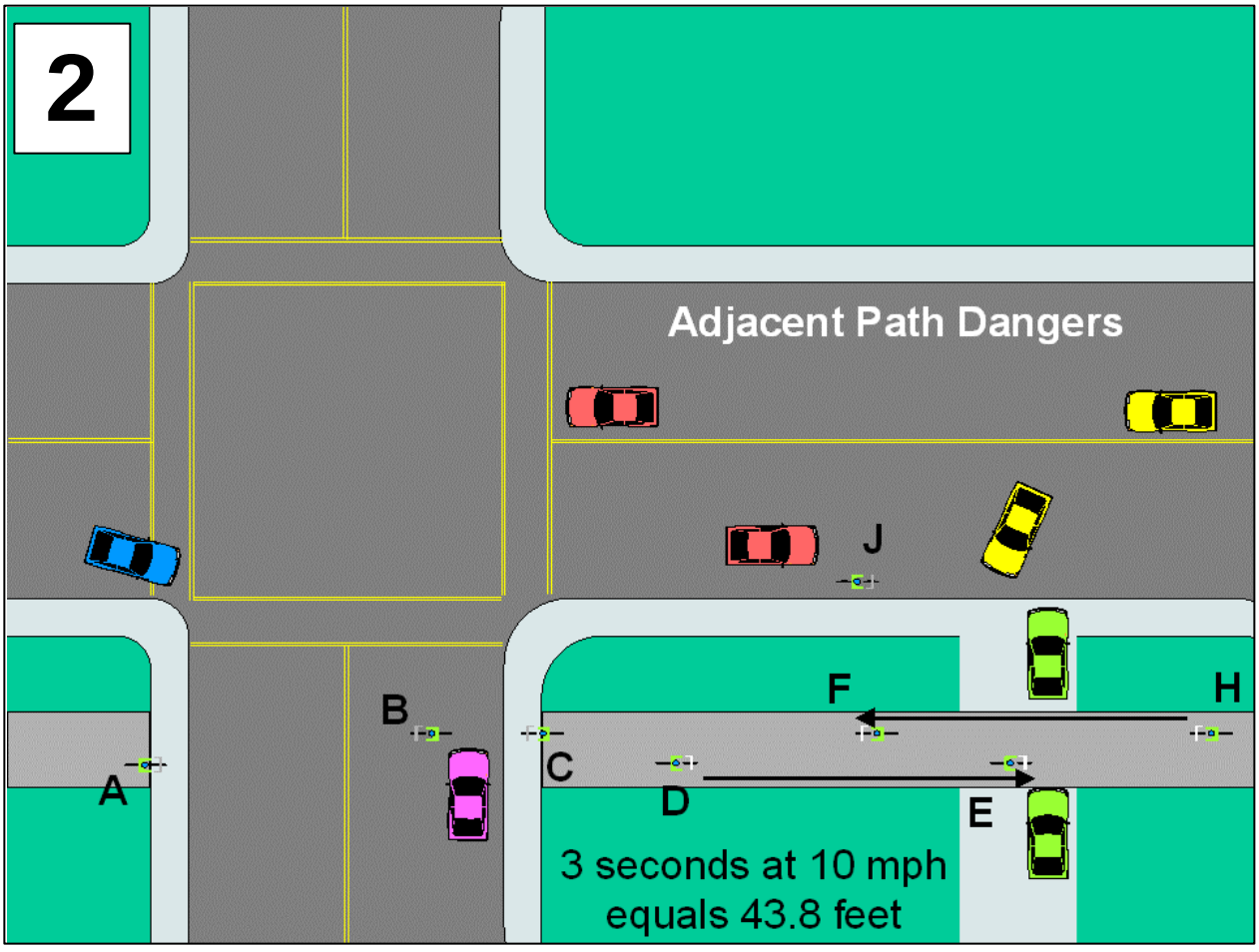
The cyclist at **A** is about to cross the street. He may ride straight across the street like cyclist **B** or he may turn left, go to the intersection, and cross in the sidewalk. The

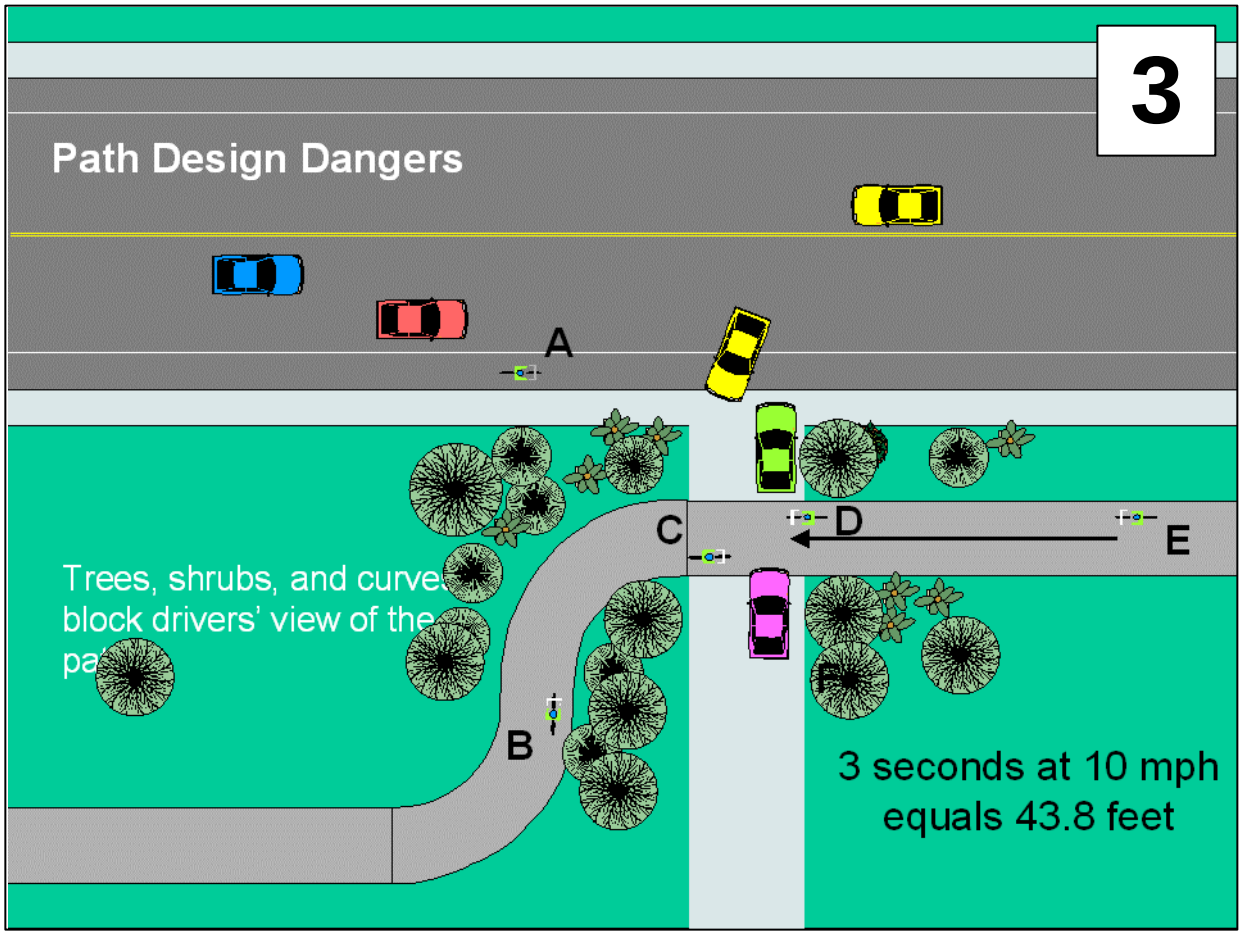
distance from the path to the adjacent street and the volume of traffic on the street being crossed will affect this decision. The path is not visible to the blue car making a right turn. The blue car approaching on the street may not be visible to the cyclist at **A**. They may not see each other until they are both in the street.

The cyclist at **B** made the decision to ride directly across the street. At 10 mph, it took only three seconds to move from **F** to **C**, and only one second to move from **C** to **B**. The driver of the purple car may not see the cyclist on the path until **C** and might run over him before he reaches **B**.

The yellow car is shown in two positions. The first is preparing for a left turn and the second is during the turn. Prior to the turn, the driver of the yellow car is looking at the red car and the bicyclist at **J**. They are both in the normal and expected positions on the road and are easily visible. The yellow car may wait until both are clear before turning slowly into the driveway. The cyclist moving from **D** to **E** (it will only take three seconds at 10 mph) will be moving into the driver's field of vision as the driver completes the turn and approaches the path. The cyclist moving from **H** to **F** will not be seen until the driver is very close to the path. The green car stopped on the sidewalk will block the yellow car's view of the cyclist at position **H**. If the yellow car decides to accelerate and turns in front of the red car, he will be moving too fast to stop for any cyclists on the path. A collision with cyclists moving in either direction is possible.

The green car is shown in two positions. Just before crossing the path, the car may stop, wait for the cyclists to clear, and then move forward to block the sidewalk. It is quite possible, however, that the green car





has gauged his speed to stop at the street and not at the path. He may not see the cyclists coming in either direction until he is actually on the path. As he approaches the street, he will focus on position **J** and may not look to the right to see the cyclist at **H**.

Figure 3 takes the adjacent path and makes it more complicated. In this scenario, we have added a curve in the path and vegetation along its edges. The cyclists are still moving at 10 mph.

The situation with the yellow car remains the same except that the vegetation now totally blocks his view of the path and cyclists moving from **E** to **D**. The yellow car will have a better view of the cyclist moving from **B** to **C**. However, if the cyclist cannot negotiate the tight curve, the two could meet head-on just left of the green car. If the driver of the purple car does everything right and stops prior to crossing the path, he still will not be able to see the cyclist moving from **B** to **C**. It will only take three seconds to travel 43.8 feet and move into conflict with the purple car.

Another potential danger lies with bike to bike conflicts. The cyclists at **B** and **D** cannot see each other. The distance between them is closing and they will pass in the middle of the curve in two seconds. Cyclist **D** will have a tendency to cut the curve and will likely meet cyclist **B** face to face.

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